

# PHILCO Model "L" RECORD CHANGER

## OPERATING INSTRUCTIONS

The Model "L" Record Changer plays seven 12" or eight 10" Records automatically. The last record remains on the turntable and repeats as long as the Record Changer is in operation.

Records may be repeated as often as desired by raising the record removing arm at A Fig. 1 to the upright position.

To reject a record and play the next record below it, pull the latch lever at L Fig. 1 forward.

To adjust the record removing arm to handle 10" records set the record removing arm change lever at D Fig. 1 opposite the number 10 stamped on the base plate. For 12" records set the lever opposite the number 12.

To adjust the pickup to play 10" records, push the pickup stop at K Fig. 1 back. (Away from the pickup needle). For 12" records pull the stop forward (toward the needle) as far as it will go.

Some units are equipped with two speed motors, and others with 78 RPM motors. When the two speed motor is used change from one speed to the other by simply moving lever at F Fig. 1 to position desired.

To start motor, throw switch at N Fig. 1 on the "on" position.

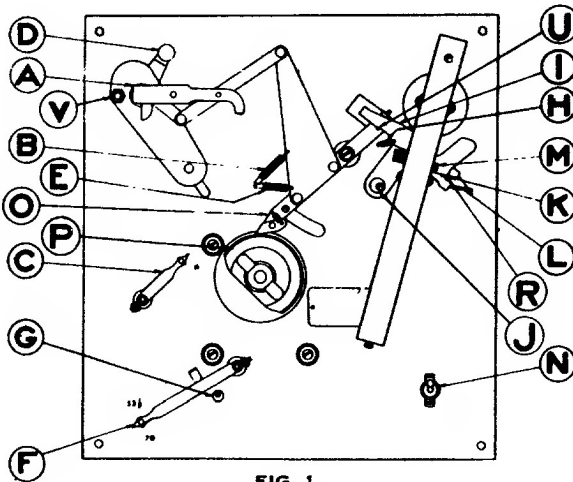


FIG. 1.

### MOTOR SPEED

The motor speed is adjusted by means of a lever at C Fig. 1 which is mounted under the turntable. The direction of swing to fast or slow is indicated by the legends F and S on the base plate.

### 33-1/3 RPM — 78 RPM SHIFT (Two-speed motors only)

Move the speed change lever at F Fig. 1 as far as it will go in the direction of swing indicated by the legends 33-1/3 and 78 on the base plate.

If adjustment of the speed change lever is required for any reason, proceed as follows: First loosen the screw which

clamps the lever to the motor shaft. This shaft is provided with a screw-driver slot in the end. Next, using a screw driver, turn this shaft in a clockwise direction until you feel it strike the stop. The motor is now in the 33-1/3 RPM position. Now set the lever against the lug provided in the base plate and opposite the legend 33-1/3 and tighten the clamp screw. This places the lever in the correct position on the motor shaft. The final step is the adjustment of the eccentric bushing at G Fig. 1 which limits the throw of the lever. First loosen the screw which holds the eccentric bushing. Next, throw the speed changer lever to its farthest 78 RPM position, (using care that the lever does not slip on the motor shaft). Then turn the eccentric bushing around until it touches the side of the lever, and tighten it in place with the screw provided.

### TRIP MECHANISM

The trip mechanism is the trigger that sets the Record Changer in motion. This is done by allowing the latch bar at O Fig. 1 to drop in front of, and be actuated by the cam at P Fig. 1. This cam is driven by the motor and is in motion as long as the motor is running. If this mechanism does not operate smoothly, the precautions outlined in succeeding paragraphs should be observed.

First of all, make sure that the square pin in the latch lever at U Fig. 1 latches properly in the notch in the lift lever at I Fig. 1. When latched, the notch should be engaged approximately one-half of its depth. The depth of engagement is adjusted by means of the eccentric washer and locking screw at J Fig. 1. Now run the Record Changer through its cycle. If the square pin fails to engage the notch in the lift lever, first check the tension of the latch spring at H Fig. 1 to insure that the notch can engage the pin. Next check the tension of the reset spring at E Fig. 1. This reset spring should not be under tension when the latch bar is latched but should have enough tension when the latch bar drops back off of the cam to cause the square pin to over travel the notch in the lift lever.

**IMPORTANT**— Before attempting to change the tension of any spring, be sure that the parts involved work freely without any tendency to bind, as of course any binding condition would preclude proper operation.

The Record Changer is adjusted at the factory to trip on a spiral trip groove record when the phonograph needle is 1 1/4" from the edge of the hole in the center of the record.

### MOTOR LUBRICATION

The motor installed in the Record Changer is governor controlled, with all gearing enclosed, and leaves the factory lubricated for proper operation. For maximum satisfaction, lubricate the motor at regular intervals with SAE No. 10 oil. Please do not use any other grade of oil.

The governor disc engages with a ring of hard felt. This felt is impregnated with a lubricating solution sufficient for proper operation for approximately a year under normal conditions.

When eccentric or oscillating trip groove records are used, tripping is effected by means of the hardened steel pin in the end of tone arm lift crank at S Fig. 2 engaging the serrated block on the trip lever at T Fig. 2. There must be a minimum of  $1/32''$

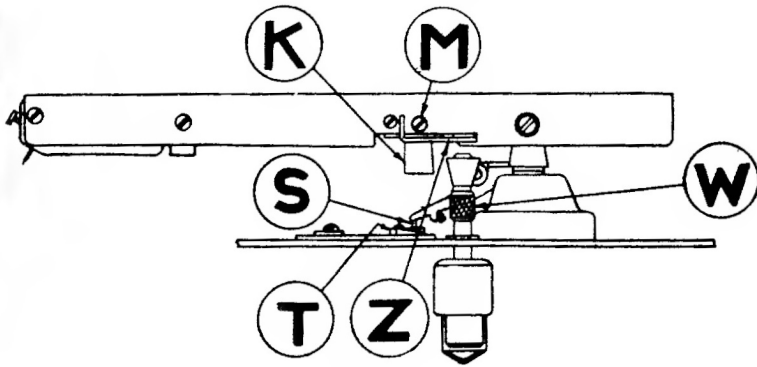


FIG. NO. 2

ing out of a worn record trip groove. Next make certain that all parts of the mechanism work freely and smoothly. If it is found that the latch bar at O Fig. 1 is not dropping in far enough to engage the cam at P Fig. 1, then check the tension of the trip spring at B Fig. 1.

In case the Record Removing Mechanism fails to operate smoothly, proceed as follows: First make certain that all parts work freely with no binding in pivots or bearings, and that the record removing arm assembly rests on the stop screw at Q Fig. 3. Next stop the motor in such a position that the latch bar at O Fig. 1 can swing by and clear the cam at P Fig. 1. Place just one record on the turntable and measure from the top of this record down to the base plate. This distance should be one inch. Now by pulling the reject lever at L Fig. 1 first, it will be found possible to swing the record removing finger at Y Fig. 3 over to where it just touches the edge of the record. If the adjustment is correct, the record removing finger should just barely rise over the edge of the first record. If adjustment is required it can be made by means of the stop screw at Q Fig. 3. In the event the record removing arm raises the record from the turntable and drops it back in place without removing it, check the lift adjustment at V Fig. 1. This adjustment consists of an eccentric stud which is provided with a lock nut, and is made by loosening the lock nut and turning the eccentric stud. The lift adjustment should be set so that the hole in the center of the record just clears turntable spindle when the Record Changer is in operation.

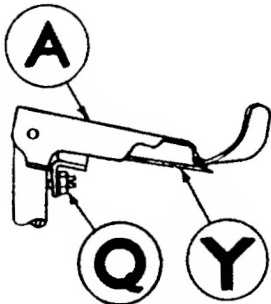


FIG. NO. 3

The pickup lowering mechanism has two functions. First, it lowers the phonograph needle gently to the surface of the record. Second, it feeds the needle toward the center of the record so that it will enter the playing groove.

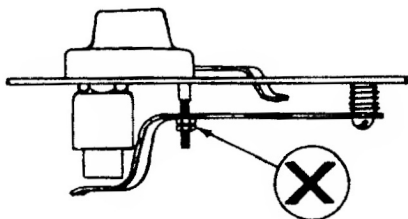


FIG. NO. 4

If the pickup descends too fast or too slow, adjust the speed of descent by turning the knurled thumb nut on the dashpot sleeve at W Fig. 2.

The unit is adjusted at the factory so that the needle will be set down approximately  $3/32''$  in from the edge of the record. An adjusting screw is provided on the side of the pickup at M Fig. 2. If the needle is being lowered onto the playing surface of the record, and the adjusting screw at M Fig. 2 fails to correct the condition proceed as follows: First stop the record changer, with the pickup in the maximum raised position and check the clearance between the underside of the pickup shelf at Z Fig. 2 and the tip of

the dashpot. This clearance should be very small as otherwise the pickup will tend to bounce as it is lowered. There must be sufficient clearance however to prevent the pickup shelf from rubbing on the tip of the dash pot, or the pickup will not swing out far enough to allow the adjustable stop at K Fig. 2 to come to rest against the dashpot. Check this clearance in both 10" and 12" record positions. If adjustment is required, the height of the dashpot may be regulated by loosening the nuts on the bottom of the lift lever stud at X Fig. 4 and changing their position on the stud. To raise the dashpot turn the nuts clockwise, to lower the dashpot turn the nuts counter-clockwise.

play between the end of the pin and the block, when, with a short needle, ( $3/8''$  Minimum Length) the pickup is resting on one record on the turntable. If the pressure of the pin on the block is not sufficient to insure operation, then check the pressure spring which is located up under the pickup.

The oval head pivot screw at R Fig. 1 serves as a pivot for the lift lever at I Fig. 1. This screw should allow the lift lever to be raised by the latch bar to its maximum height without binding but also without any additional play.

If the Record Changer fails to trip, see if the phonograph needle is jump-